



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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APPEAL BRIEF FOR THE APPELLANT

Ex parte Carlos MANZANARES

**METHOD AND HIERARCHICAL RADIO NETWORK OPERATIONS SYSTEM FOR  
CONTROLLING A MOBILE COMMUNICATIONS NETWORK**

Serial No. 10/736,632

Appeal No.:

Group Art Unit: 2419

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Appeal Brief



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Appellant:

Carlos MANZANARES

Appeal No.:

Serial Number: 10/736,632

Group Art Unit: 2419

Filed: December 17, 2003

Examiner: Salman AHMED

For: METHOD AND HIERARCHICAL RADIO NETWORK OPERATIONS SYSTEM  
FOR CONTROLLING A MOBILE COMMUNICATIONS NETWORK

BRIEF ON APPEAL

December 17, 2008

I. INTRODUCTION

This is an appeal from the final rejection set forth in an Official Action dated April 29, 2008, finally rejecting claims 1, 2, 7, 9-11, and 21-24 under 35 U.S.C. § 102(a) as allegedly being anticipated by Park et al. (U.S. Patent Publication No. 2002/0006779) ("Park"); finally rejecting claims 3 and 12 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Park in view of main requirements 3GPP TS 32.600 4.0.0 Release 4 (3GPP) and further in view of Sabat Jr. et al. (U.S. Patent Publication No. 2001/0037395) ("Sabat"); and finally rejecting claims 6, 8, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Park and further in view of 3GPP.

A Notice of Appeal and a Pre-Appeal Brief Request for Review were timely filed on September 18, 2008. A Notice of Panel Decision from the Pre-Appeal Brief Request for Review was issued on November 17, 2008 indicating the rejection of claims 1-3, 6-12, 16, and 21-24 were maintained. Accordingly, this Appeal Brief is being timely filed within one month of the mail date of the Notice of Panel Decision.

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## II. REAL PARTY IN INTEREST

The real party in interest in this application is Nokia Corporation of Espoo, Finland by virtue of an Assignment by the inventor, which assignment was filed on May 4, 2004.

### III. STATEMENT OF RELATED APPEALS AND INTERFERENCES

There are no known related appeals and/or interferences which will directly effect or be directly effected by or have a bearing on the Board's decision in this appeal.

#### IV. STATUS OF CLAIMS

Claims 1-24 are currently pending in the above-identified application. Claims 4, 5, 13-15, and 17-20 were objected to in the April 29, 2008 Office Action, because these claims were dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-3, 6-12, 16, and 21-24 were rejected to in the April 29, 2008 Office, and, therefore, claims 1-3, 6-12, 16, and 21-24 are the subject of this appeal. Claims 1, 2, 7, 9-11, and 21-24 were rejected under 35 U.S.C. § 102(a) as being anticipated by Park et al. (U.S. Patent Publication No. 2002/0006779, hereinafter "Park"). Claims 3 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Park in view of Concept and main requirements 3GPP TS 32.600 4.0.0 Release 4 (3GPP) and further in view of U.S. Patent Publication No. 2001/0037395 to Sabat Jr. et al. ("Sabat"). Claims 6, 8, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Park and further in view of 3GPP. The claims have not been amended since the Final Office Action. Thus, the claims stand as they stood prior to the Final Office Action.

## V. STATUS OF AMENDMENTS

No amendment was included with the Pre-Appeal Brief Request for Review that was filed on September 18, 2008. The claims are shown in the appropriate appendix to this brief, as presently pending. Likewise no response under 37 C.F.R. § 1.116 was filed after the Final Office Action of April 29, 2008.

## VI. SUMMARY OF CLAIMED SUBJECT MATTER

In the following, all citations are to the application as filed.

Independent claim 1, upon which claims 2-9 are dependent, recites a method that includes controlling a mobile communications network by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level. See Specification, paragraphs [0002], [0012], [0034], and [0042] and Figure 1. The controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level. See Specification, paragraphs [0012], [0035], [0042], and [0043]. The method also includes generating a call for data depending on the controlling action. See Specification, paragraphs [0012], [0035], [0042], and [0044] and Figure 1. The method additionally includes forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action. See Specification, paragraphs [0012] and [0044] and Figure 1. The method further includes providing data on the part of the radio network operations system on the subordinate level affected by the controlling action in response to the call. See Specification, paragraphs [0012] and [0044]. The method also includes forwarding the data to the radio network operations system on the superior level. See Specification, paragraphs [0012] and [0047].

Independent claim 10, upon which claims 11-21 are dependent, recites a system that includes at least one radio network operations system on a subordinate level. See Specification, paragraphs [0002], [0021], [0034], and [0042] and Figure 4. The system also includes a radio network operations system on a superior level, an initiator that is part of the radio network operations system on the superior level configured to initiate a

controlling action. See Specification, paragraphs [0002], [0021], [0034], [0034], [0042], and [0043] and Figure 1. The system additionally includes a call generator configured to generate a call for data depending on the controlling action. See Specification, paragraphs [0021], [0035], [0042], and [0044]. The system further includes a first interface between said radio network operations system on the subordinate level and said radio network operations system on the superior level configured to forward the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. See Specification, paragraphs [0021], [0044], and [0052] and Figures 3 and 4. The system also includes a first provider that is part of the radio network operations system on the subordinate level configured to provide data in response to the call. See Specification, paragraphs [0021] and [0044] and Figure 1.

Claim 22 recites a system that includes at least one radio network operations system on a subordinate level. See Specification, paragraphs [0021]. The system includes a radio network operations system on a superior level, initiating means being part of the radio network operations system on the superior level for initiating a controlling action. See Specification, paragraphs [0021], [0042], and [0043] and Figure 1. The system includes a call generating means for generating a call for data depending on the controlling action. See Specification, paragraphs [0021], [0042], and [0044] and Figure 1. The system includes a first interface between said radio network operations system on the subordinate level and said radio network operations system on the superior level. See Specification, paragraph [0021] and Figure 3. The first interface is configured to forward the call to at least one of the radio network operations systems on the



subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. See Specifications, paragraph [0021], [0042], and [0052] and Figures 3 and 4. The first providing means being part of the radio network operations system on the subordinate level for providing data in response to the call. See Specification, paragraphs [0021] and [0044].

Claim 23 recites an apparatus that includes a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level. See Specification, paragraph [0021]. The first interface configured to forward a call for data which depends on a controlling action to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. See Specification, paragraphs [0021] and [0052] and Figure 3. Data is provided in response to the call through the radio network operations system on the subordinate level. See Specification, paragraphs [0021] and [0044].

Claim 24 recites a method. The method includes a forwarding a call for data which depends on a controlling action, using a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level, to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. See Specification, paragraphs [0012], [0021], [0044], and [0052] and Figures 1 and 3. The method also includes providing data in response to the call through the radio network operations system on the subordinate level. See Specification, paragraph [0012].

## VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are the specific, detailed rejections of claims 1-3, 6-12, 16, and 21-24 exactly as set forth in the Office Action of April 29, 2008, at pages 2-15. In summary, those rejections are as follows:

1. Claims 1, 2, 7, 9-11, and 21-24 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Park et al. (U.S. Patent Publication No. 2002/0006779, hereinafter "Park");
2. Claims 3 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park in view of Concept and main requirements 3GPP TS 32.600 4.0.0 Release 4 (3GPP) and further in view of U.S. Patent Publication No. 2001/0037395 to Sabat Jr. et al. ("Sabat"); and
3. Claims 6, 8, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park and further in view of 3GPP.

## VIII. APPELLANT'S ARGUMENTS

Appellant respectfully submits that each of rejected claims 1-3, 6-12, 16, and 21-24 recite subject matter that is not taught, disclosed, or suggested by the cited references. Each of the claims is being argued as suggested by 37 C.F.R. § 41.37(c)(1)(vii), and thus each of the claims stands or falls alone.

1. Claims 1, 2, 7, 9-11, and 21-24 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Park et al. (U.S. Patent Publication No. 2002/0006779, hereinafter "Park").

### a. **Background of the Reference on which the Rejection is Based**

Park generally discusses an apparatus and method for managing mobile communication network using TMN in IMT-2000 system. In particular, Park discusses managing a mobile communication network in an IMT-2000 system by means of a TMN, which can manage the IMT-2000 telecommunication network in a standardized manner. See Park, paragraph [0001]. According to Park, the apparatus includes a TMN network management center for managing state information of the sub blocks within the BSM, the plurality of control stations, and the plurality of base stations by means of the TMN method. See Park, paragraph [0010].

### b. **Relevant Law**

By its language, 35 U.S.C. § 102 requires that each and every element of a claim be present in a single cited reference to properly have the reference anticipate the claim. *See In re Bond*, 910 F.2d 831, 15 USPQ2d 1566, 1567 (Fed. Cir. 1992), *citing Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988); *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452,

1458, 221 USPQ 481, 485 (Fed. Cir. 1984); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321, 1326 (Fed. Cir. 1992); and *Elmer v. ICC Fabricating Inc.*, 67 F.3d 1571, 36 USPQ2d 1417, 1419 (Fed. Cir. 1995). More particularly, “[a] rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference.’ *In re Paulsen*, 30 F.3d 1475, 1478-79 [31 USPQ2d 1671] (Fed. Cir. 1994); see *Karsten Manufacturing Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 [58 USPQ2d 1286] (Fed. Cir. 2001) (‘Invalidity on the ground of ‘anticipation’ requires lack of novelty of the invention as claimed... . that is, all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim.’).” *In re Buszard*, 84 USPQ2d 1749, 1750 (Fed. Cir. 2007).

**c. Application of the Relevant Law**

Claim 1, upon which claims 2-9 are dependent, recites a method. The method includes controlling a mobile communications network by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level. The controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level. The method includes generating a call for data depending on the controlling action. The method includes forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action. The method includes providing data on the part of the radio network operations system on the subordinate level affected by the controlling action in response to the call. The

method includes forwarding the data to the radio network operations system on the superior level.

Independent claim 10, upon which claims 11-21 are dependent, recites a system that includes at least one radio network operations system on a subordinate level. The system also includes a radio network operations system on a superior level, an initiator that is part of the radio network operations system on the superior level configured to initiate a controlling action. The system additionally includes a call generator configured to generate a call for data depending on the controlling action. The system further includes a first interface between said radio network operations system on the subordinate level and said radio network operations system on the superior level configured to forward the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. The system also includes a first provider that is part of the radio network operations system on the subordinate level configured to provide data in response to the call.

Claim 22 recites a system that includes at least one radio network operations system on a subordinate level. The system includes a radio network operations system on a superior level, initiating means being part of the radio network operations system on the superior level for initiating a controlling action. The system includes a call generating means for generating a call for data depending on the controlling action. The system includes a first interface between said radio network operations system on the subordinate level and said radio network operations system on the superior level. The first interface is configured to forward the call to at least one of the radio network

operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. The first providing means being part of the radio network operations system on the subordinate level for providing data in response to the call.

Claim 23 recites an apparatus that includes a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level. The first interface configured to forward a call for data which depends on a controlling action to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. Data is provided in response to the call through the radio network operations system on the subordinate level.

Claim 24 recites a method. The method includes a forwarding a call for data which depends on a controlling action, using a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level, to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level. The method also includes providing data in response to the call through the radio network operations system on the subordinate level.

By at least the aforementioned features of the independent claims, because a mobile communication network is controlled by a hierarchical radio network OS with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level, an up-to-date picture of the regional radio network

can be provided, as well as reduction in the non-operative time of the participating superior and subordinate radio network OSs.

As will be discussed below, Appellant respectfully submits that Park does not disclose, either expressly or inherently, all of the elements in claims 1, 2, 7, 9-11, and 21-24, and, therefore fails to provide the features and advantages discussed above.

Park generally discusses an apparatus and method for managing mobile communication network using TMN in IMT-2000 system. In particular, Park discusses managing a mobile communication network in an IMT-2000 system by means of a TMN. See Park, paragraph [0001]. However, Appellant respectfully submits that that Park does not disclose, either expressly or inherently, at least, “controlling a mobile communications network by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level, wherein the controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level” (emphasis added), as recited in claim 1.

Rather, Park discusses managing a mobile communications network in an International mobile telecommunication (IMT)-2000 system by means of a telecommunication management network (TMN). See Park, paragraph [0026] and Figure 1. The TMN comprises a TMN network management center 100, a TMN repeater 201 installed within a base station manager (BSM) 200, a local TMN repeater 301 installed within each of control stations 300, and a sub block statement management section 401 installed within each of base stations 400. See Park, Paragraph [0026] and Figure 1.

More particularly, Park states, in part:

The TMN network management center 100 manages a state information, i.e., configuration, fault, performance, statistics, etc., of sub blocks 202, 302, 402 installed within the BSM 200, the plurality of control stations 300, the plurality of base stations 400 by means of the TMN method, and simultaneously transfer a common management information service element (CMISE) service execute instructions ... to the TMN repeater 301 within the BSM 200.

See Park, Paragraph [0027]. In other words, the TMN network management center 100 manages states information of sub blocks 202, 302, and 402 and simultaneously transfers CMISE service execute instructions to the BSM 200. Nowhere does Park suggest that a mobile communication network is controlled “by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level”, as recited in claim 1.

Furthermore, the Office Action erroneously alleged that the control station 300 described in Park corresponds to the “radio network operations system on a subordinate level” as recited in claim 1, for example, and that the TMN network management center 100 described in Park corresponds to the “radio network operations system on a superior level”, as recited in claim 1, for example. The misapplication of Park is clear illustrated in the Office Action. For example, the TMN network management center 100 described in Park manages state information of the respective sub blocks installed in the BSM 200, the control stations 300, and the base stations 400 and does not initiate any type of controlling action, as required by claim 1. Because the TMN network management center 100 described in Park does not initiate any type of controlling action, it is readily apparent



that the TMN network management center 100 described in Park cannot equate to “a radio network operations system on a superior level” of claim 1.

Moreover, the control station 300 described in Park does not constitute a “radio network operations system on a subordinate level”, as recited in claim 1, because the control station 300 described in Park serves as a generator for state information, i.e., configuration, fault, performance, statistics, etc., of the sub block 302 and does not “generat[e] a call for data depending on the controlling action” (claim 1, lines 7) to be forwarded “to at least one of the radio network operations system on the subordinate level affected by the controlling action” (claim 1, lines 8-9). See Park, Paragraphs [0041] and [0053]. For Park to suggest (which is not admitted) the above-quoted features of claim 1, the TMN network management center 100 must “generat[e] a call for data depending on the controlling action” (claim 1, lines 7) to be forwarded “to at least one of the radio network operations system on the subordinate level affected by the controlling action” (claim 1, lines 8-9). This is clearly not the case in Park, because the control station 300 (e.g. the alleged the radio network operations system on the subordinate level) described in Park generates the state information and then transmits it to the TMN network management center 100. If control station 300 described in Park was configured as claim 1 (which is not admitted), then the control station 300 would keep sending information to itself, thereby resulting in an inoperative system.

Therefore, in light of the above, Appellant respectfully submits that the Office Action's interpretation of the control station 300 and the TMN network management center 100, as described in Park, being part of the “hierarchical radio network operations system” is clearly incorrect.

Because Park does not disclose, either expressly or inherently, “at least one radio network operation system on a subordinate level and a radio network operations system on a superior level”, Park does not provide any type of suggestion of “a hierarchical network operation system”, as recited in claim 1. In fact, the Office Action incorrectly alleged that the IMT-2000 system equates to the hierarchical network operation system of claim 1. See Office Action, page 2, item 2. For the assertion made in the Office Action to be true, the IMT-2000 system described in Park must include “at least one radio network operation system on a subordinate level and a radio network operations system on a superior level” (claim 1, lines 2-4). This, as discussed above, is definitely not the case in Park. The IMT-2000 system described in Park does not equate to the “hierarchical radio network operations system” recited in claim 1, because the IMT-2000 includes a base station 400, control station 300, and a BSM 200 and does not include “at least one radio network operation system on a subordinate level and a radio network operations system on a superior level” (claim 1, lines 2-4). See Park, Figure 1. Furthermore, Figure 1 of Park clearly illustrates that the TMN network management center 100 is outside of the IMT-2000 system, and, therefore, cannot form part of any hierarchical radio network operations system. Therefore, in view of the above, it is readily apparent that the IMT-2000 system described in Park does not equate to the “hierarchical radio network operations system” recited in claim 1.

Furthermore, because Park cannot remotely suggest “a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level”, Park cannot disclose, either expressly or inherently, at least, “generating a call for data depending on the

controlling action, forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action, and providing data on the part of the radio network operations system on the subordinate level affected by the controlling action in response to the call,” as recited in claim 1.

Therefore, Appellant respectfully requests that the rejection of independent claim 1 be withdrawn and this claim be allowed for at least the reasons stated above.

Claim 10 recites, in part, “at least one radio network operations system on a subordinate level; a radio network operations system on a superior level, an initiator that is part of the radio network operations system on the superior level configured to initiate a controlling action; a call generator configured to generate a call for data depending on the controlling action; a first interface between said radio network operations system on the subordinate level and said radio network operations system on the superior level configured to forward the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level” (claim 10, lines 2-12). Therefore, Appellant respectfully requests that the rejection of independent claim 10 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1.

Claim 22 recites, in part, “at least one radio network operations system on a subordinate level; a radio network operations system on a superior level, initiating means being part of the radio network operations system on the superior level for initiating a controlling action; call generating means for generating a call for data depending on the controlling action; a first interface between said radio network operations system on the

subordinate level and said radio network operations system on the superior level for forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and for forwarding data to the radio network operations system on the superior level” (claim 22, lines 2-12). Therefore, Appellant respectfully requests that the rejection of independent claim 22 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1.

Claim 23 recites, in part, “a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level configured to forward a call for data which depends on a controlling action to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level” (claim 23, lines 2-6). Therefore, Appellant respectfully requests that the rejection of independent claim 23 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1.

Claim 24 recites, in part, “forwarding a call for data which depends on a controlling action, using a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level, to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level” (claim 24, lines 2-6). Therefore, Appellant respectfully requests that the rejection of independent claim 24 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1.

Claim 2 is dependent upon claim 1, and, therefore, inherits the patentable features thereof. Appellant respectfully requests that the rejection of claim 2 be withdrawn and this claim be allowed for at least the same reasons as base claim 1, and for the specific limitations recited therein.

Claim 7 recites, in part, “the data demanded depending on the controlling action comprise network elements parameters and/or network resources parameters of the radio network on the subordinate level” (claim 7, lines 1-3). However, Appellant respectfully submits that Park cannot suggest the above-quoted feature of claim 7, as Park fails to disclose, either expressly or implicitly, “a radio network on the subordinate level”. Because Park does not disclose, either expressly or implicitly, any type of “radio network on the subordinate level”, it would be impossible for Park to suggest that “the data demanded...comprises network elements parameters and/or network resources parameters of the radio network on the subordinate level” (claim 8, lines 1-3, emphasis added). Accordingly, Appellant respectfully requests that the rejection of dependent claim 7 be withdrawn and this claim be allowed for at least the same reasons as base claim 1, from which it depends upon, and for the specific limitations recited therein.

Claim 9 recites, in part, “said radio network operations system on a subordinate level is an operations system for managing a regional radio network” (claim 9, lines 2-3).

Claim 21, which has its own scope, recites a similar features. Appellant respectfully submits that the above-quoted feature is not disclosed, either expressly or inherently, by Park. The Office Action asserted that paragraph [0026] and Figure 1 of Park illustrates that each of control stations 300 manage multiple base stations 400, i.e., the alleged regional radio network. However, this assertion made in the Office Action is clearly

incorrect. For example, paragraph [0026] of Park discusses that Figure 1 is a functional block diagram illustrating an apparatus for managing a mobile communication network in an International mobile telecommunication (IMT)-2000 system by means of a telecommunication management network (TMN). Paragraph [0026] of Park further discusses that the TMN comprises a TMN network management center 100, a base station manager 200, a control station 3000, and a base station 400. However, nothing in paragraph [0026] nor Figure 1 of Park remotely suggests how the control station 300 described in Park is “an operations system for managing a regional radio network” (claim 9, lines 2-3).

Accordingly, Appellant respectfully requests that the rejection of dependent claim 7 be withdrawn and this claim be allowed for at least the same reasons as base claim 1, from which it depends upon, and for the specific limitations recited therein.

Claim 21 recites, in part, “said radio network operations system on a subordinate level is an operations system configured to manage a regional radio network” (claim 21, lines 1-3). Therefore, Appellant respectfully submits that the rejection of dependent claim 21 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 7 and with respect to base claim 10, from which it depends upon.

2. Claims 3 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park in view of Concept and main requirements 3GPP TS 32.600 4.0.0 Release 4 (3GPP) and further in view of U.S. Patent Publication No. 2001/0037395 to Sabat Jr. et al. (“Sabat”).

**a. Background of the Reference on which the Rejection is Based**

The 3GPP document generally discusses the configuration management (CM) aspects of managing a 3G network. See 3GPP, page 6, item 1. In particular, the 3GPP document discusses a set of controls to be employed to effect set--up and changes to a 3G network in such a way that operational capability and Quality of Service (QoS), network integrity and system inter working are ensured. See 3GPP, page 6, item 1. The 3GPP further discusses the interface definition and behavior for the management of relevant 3G NEs in the context of the described management environment. See 3GPP, page 6, item 1.

Sabat generally discusses operations and maintenance architecture for a multiprotocol distributed system. Sabat generally discusses an architecture for providing operations and maintenance functionality in an open access wireless signal distribution system. See Sabat, Abstract. The open access system makes use of a common, shared, distributed radio frequency distribution network and associated network entities that enable a system operator to offer access to wireless infrastructure that maybe shared among multiple wireless service providers (WSPs). See *Id.*

**b. Relevant Law**

All of the rejections presented are rejections under 35 U.S.C. § 103, for alleged obviousness. In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *See In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A *prima facie* case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to

make the proposed combination or other modification. See *In re Lintner*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972); *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442-43 (Fed. Cir. 1991) (explaining the three elements of a *prima facie* case of obviousness include: (1) motivation for the combination, (2) a reasonable expectation of success, and (3) a disclosure of all the claim elements by the prior art). See also *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

Furthermore, the conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption, or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967). The Federal Circuit has repeatedly cautioned against employing hindsight by using Appellants' disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, e.g., *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

When determining obviousness, "the [E]xaminer can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art



or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), citing *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). “Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence.’” *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). “Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact.” *Dembiczak*, 175 F.3d at 999-1000, 50 USPQ2d at 1617, citing *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993). Further, as pointed out by the Federal Circuit, the scope of the claim must be the first determination. “[T]he name of the game is the claim.” *In re Hiniker Co.*, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). For the reasons set forth below, it is respectfully submitted both that the Office Action has not provided a *prima facie* case of obviousness, and that the evidence presented by Appellant in the form of unquestionable un-obvious advantages over the art of record would rebut such a *prima facie* case, had one been presented.

**c. Background of the Reference on which the Rejection is Based**

As discussed above, the 3GPP document generally document discusses a set of controls to be employed to effect set--up and changes to a 3G network in such a way that operational capability and Quality of Service (QoS), network integrity and system inter working are ensured. See 3GPP, page 6, item 1. As also discussed above, Sabat generally discusses Sabat generally discusses an architecture for providing operations and maintenance functionality in an open access wireless signal distribution system. See

Sabat, Abstract. However, nothing was found or cited in either document that cures the above-mentioned deficiencies of Park, as discussed above with respect to claims 1, 10, and 21-24. For example, neither the 3GPP document nor Sabat, whether considered individually or in combination, disclose, either expressly or implicitly, at least, “controlling a mobile communications network by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level”, as recited in claim 1, and as similarly recited in claims 10, and 21-24.

Because claim 3 is dependent upon claim 1 and claim 12 is dependent upon claim 10, Appellant respectfully submits that claims 3 and 12 inherit the patentable features of their respective base claims. Therefore, Appellant respectfully requests that the rejection of dependent claims 3 and 12 be withdrawn and these claims be allowed for at least the same reasons as their respective base claims, and for at least the reasons stated below.

Claim 3 recites, in part, “retrieving data by the radio network operations system on the superior level from at least one of the radio network operations systems on the subordinate level” (claim 3, lines 2-3). Claim 12, which has its own scope, recites a similar feature. Appellant respectfully submits that Park cannot disclose, either expressly or implicitly, the above-quoted feature, because Park does not suggest any type of “radio network operations system on the superior level”, as discussed above with respect to claim 1. Because Park does not suggest any type of “radio network operations system on the superior level”, paragraph [0053] of Park, which was relied upon in the Office Action, cannot suggest that the “data [is retrieved] by the radio network operations system on the superior level from at least one of the radio network operations systems on

the subordinate level”, as recited in claim 3, and as similarly recited in claim 12. Furthermore, nothing was found or cited in either the 3GPP document or Sabat to cure the above-mentioned deficiencies of Park with respect to claims 3 and 12. Therefore, Appellant respectfully submits that none of the references, whether considered alone or in combination, disclose, either expressly or implicitly, at least, “retrieving data by the radio network operations system on the superior level from at least one of the radio network operations systems on the subordinate level”, as recited in claim 3, and as similarly recited in claim 12.

Therefore, for at least the reasons stated above, Appellant respectfully requests that the rejection of dependent claims 3 and 12 be withdrawn and these claims be allowed.

3. Claims 6, 8, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park and further in view of 3GPP.

a. **Background of the Reference on which the Rejection is Based**

Park and 3GPP are discussed above.

b. **Relevant Law**

All of the rejections presented are rejections under 35 U.S.C. § 103, for alleged obviousness. In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. See *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A *prima facie* case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to

make the proposed combination or other modification. See *In re Lintner*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972); *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442-43 (Fed. Cir. 1991) (explaining the three elements of a *prima facie* case of obviousness include: (1) motivation for the combination, (2) a reasonable expectation of success, and (3) a disclosure of all the claim elements by the prior art). See also *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

Furthermore, the conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption, or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967). The Federal Circuit has repeatedly cautioned against employing hindsight by using Appellants' disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, e.g., *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

When determining obviousness, "the [E]xaminer can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art

or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), citing *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). “Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence.’” *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). “Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact.” *Dembiczak*, 175 F.3d at 999-1000, 50 USPQ2d at 1617, citing *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993). Further, as pointed out by the Federal Circuit, the scope of the claim must be the first determination. “[T]he name of the game is the claim.” *In re Hiniker Co.*, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). For the reasons set forth below, it is respectfully submitted both that the Office Action has not provided a *prima facie* case of obviousness, and that the evidence presented by Appellant in the form of unquestionable un-obvious advantages over the art of record would rebut such a *prima facie* case, had one been presented.

**c. Background of the Reference on which the Rejection is Based**

As discussed above, the 3GPP document generally document discusses a set of controls to be employed to effect set--up and changes to a 3G network in such a way that operational capability and Quality of Service (QoS), network integrity and system inter working are ensured. See 3GPP, page 6, item 1. However, nothing was found or cited in the 3GPP document that cures the above-mentioned deficiencies of Park, as discussed above with respect to claims 1, 10, and 21-24. For example, the 3GPP document does

not disclose, either expressly or implicitly, at least, “controlling a mobile communications network by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level”, as recited in claim 1, and as similarly recited in claims 10, and 21-24.

Because claims 6 and 8 are dependent upon claim 1 and claim 16 is dependent upon claim 10, Appellant respectfully submits that claims 6, 8, and 16 inherit the patentable features of their respective base claims. Therefore, Appellant respectfully requests that the rejection of dependent claims 6, 8, and 16 be withdrawn and these claims be allowed for at least the same reasons as their respective base claims, and for at least the reasons stated below.

Claim 6 recites, in part, “the controlling action comprises monitoring and controlling a configuration of radio network elements and/or radio network resources” (claim 6, lines 1-3). Appellant respectfully submits that none of the references, whether considered individually or in combination, disclose, either expressly or implicitly, the above-quoted feature. In particular, for reasons discussed above, Appellant notes that neither reference cited in the Office Action remotely suggests any type of “a hierarchical radio network operations system...wherein the controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level” (claim 1, lines 2-6). Because neither reference discloses the above-quoted feature of claim 1, neither reference could possibly suggest that the “controlling action [includes] monitoring and controlling a configuration of radio network elements and/or radio network resources” (claim 6, lines 2-3). Therefore, Appellant respectfully submits that the

rejection of claim 6 be withdrawn and this claim be allowed for at least the reasons stated above.

Claim 16, which has its own scope recites a features similar to that recited in claim 6. Appellant notes that the Office Action does not set forth any type of substantive rejection with respect to claim 16. However, in an attempt to further advance prosecution of the above-identified application, Appellant respectfully submits that neither reference, whether considered individually or in combination, could remotely suggest “a monitor configured to monitor configuration of radio network elements and/or radio network resources; and a controller configured to control configuration of radio network elements and/or radio network resources”, as recited in claim 16. Therefore, Appellant respectfully submits that the rejection of claim 16 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 6.

Claim 8 recites, in part, “the data demanded depending on the controlling action comprise topology data of the radio network on the subordinate level” (claim 8, lines 1-3). However, Appellant respectfully submits that neither reference, whether considered alone or in combination, suggests the above-quoted feature of claim 8, as both references, which were cited in the Office Action, are silent as to “the radio network on the subordinate level”. Because both reference do not disclose, either expressly or implicitly, any type of “radio network on the subordinate level”, it would be impossible for either reference to disclose, either expressly or implicitly, that “the data demanded...comprise topology data of the radio network on the subordinate level” (claim 8, lines 1-3).

For all of the above noted reasons, it is strongly contended that certain clear differences exist between the present invention as claimed in claims 1-24 and the prior

art relied upon by the Examiner. It is further contended that these differences are more than sufficient that the present invention would not have been obvious to a person having ordinary skill in the art at the time the invention was made.

This final rejection being in error, therefore, it is respectfully requested that this honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of application claims 1-24.

In the event that this paper is not being timely filed, the Appellant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees which may be due with respect to this paper may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,  
SQUIRE, SANDERS & DEMPSEY L.L.P.



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Encls: Appendix 1 - Claims on Appeal  
Appendix 2 - Evidence  
Appendix 3 - Related Proceedings



## APPENDIX 1

### CLAIMS ON APPEAL

1. (Previously Presented) A method, comprising:

controlling a mobile communications network by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level, wherein the controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level;

generating a call for data depending on the controlling action;

forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action;

providing data on the part of the radio network operations system on the subordinate level affected by the controlling action in response to the call; and

forwarding the data to the radio network operations system on the superior level.

2. (Previously Presented) The method according to claim 1, further comprising:  
executing the controlling action based on the retrieved data.

3. (Previously Presented) The method according to claim 1, further comprising:  
retrieving data by the radio network operations system on the superior level from at least one of the radio network operations systems on the subordinate level;  
exporting the retrieved data by the radio network operations system on the

subordinate level, importing the data by the radio network operations system on the superior level; and

storing the imported data to data memory in the radio network operations system on the superior level.

4. (Previously Presented) The method according to claim 3, further comprising:  
ascertaining whether the call for data demanded depending on the controlling action is to be forwarded to the radio network operations system on the subordinate level affected by the controlling action forwarding the call for data to the data memory when the call is not to be forwarded to the radio network operations system on the subordinate level;

providing data on the part of the data memory in response to the call; and  
forwarding the data within the radio network operations system on the superior level.

5. (Previously Presented) The method according to claim 4, further comprising:  
ascertaining whether the data demanded depending on the controlling action can be received from the radio network operations system on the subordinate level affected by the controlling action within a predetermined latency; and

forwarding the call for data to the data memory when the data can not be received within a predetermined latency before providing data on the part of the data memory.

6. (Previously Presented) The method system according to claim 1, wherein the controlling action comprises monitoring and controlling a configuration of radio network elements and/or radio network resources.

7. (Previously Presented) The method according to claim 1, wherein the data demanded depending on the controlling action comprise network elements parameters and/or network resources parameters of the radio network on the subordinate level.

8. (Previously Presented) The method according to claim 1, wherein the data demanded depending on the controlling action comprise topology data of the radio network on the subordinate level.

9. (Previously Presented) The method system according to claim 1, wherein said radio network operations system on a subordinate level is an operations system for managing a regional radio network.

10. (Previously Presented) A system, comprising:

at least one radio network operations system on a subordinate level;

a radio network operations system on a superior level, an initiator that is part of the radio network operations system on the superior level configured to initiate a controlling action;

a call generator configured to generate a call for data depending on the controlling action;

a first interface between said radio network operations system on the subordinate level and said radio network operations system on the superior level configured to forward the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level; and a first provider that is part of the radio network operations system on the subordinate level configured to provide data in response to the call.

11. (Previously Presented) The system according to claim 10, further comprising:  
an executor configured to execute the controlling action based on the retrieved data.

12. (Previously Presented) The system according to claim 10, further comprising:  
a retriever that is part of the radio network operations system on the superior level configured to retrieve data from at least one of the radio network operations systems on the subordinate level;

an exporter that is part of the radio network operations system on the subordinate level configured to export the retrieved data,

an importer that is part of the radio network operations system on the superior level configured to import the data; and

data memory that is part of the radio network operations system on the superior level configured to store the imported data.

13. (Previously Presented) The system according to claim 12, further comprising:

a first ascertainer that is part of the radio network operations system on the superior level configured to ascertain whether the call for data demanded depending on the controlling action is to be forwarded to the radio network operations system on the subordinate level affected by the controlling action;

a second provider that is part of the radio network operations system on the superior level configured to provide data stored in the data memory in response to the call; and

a second interface within said radio network operations system on the superior level further configured to forward the call for data to said second provider when the call is not to be forwarded to said radio network operations system on the subordinate level and to forward the data provided by said provider within the radio network operations system on the superior level.

14. (Previously Presented) The system according to claim 13, wherein said first and second interfaces are uniform interfaces.

15. (Previously Presented) The system according to claim 13, further comprising:

a second ascertainer that is part of the radio network operations system on the superior level configured to ascertain whether the data demanded depending on the

controlling action can be received from the radio network operations system on the subordinate level affected by the controlling action within a predetermined latency, said second interface further configured to forward the call for data to said second provider when the data cannot be received within a predetermined latency.

16. (Previously Presented) The system according to claim 10, further comprising:  
a monitor configured to monitor configuration of radio network elements and/or radio network resources; and

a controller configured to control configuration of radio network elements and/or radio network resources.

17. (Previously Presented) The system according to claim 13, wherein said call generator, said first and second interfaces, and said first and second providers are configured to generate and forward a call for network elements parameters and/or network resources parameters and to forward and provide said parameters.

18. (Previously Presented) The system according to claim 13, wherein said call generator, said first and second interfaces, and said first and second provider are configured to generate and forward a call for topology data and to forward and provide said topology data.

19. (Previously Presented) The system according to claim 18, wherein said first and second interfaces and said first and second providers comprise a topology reader and a managed object reader.

20. (Previously Presented) The system according to claim 13, further comprising:  
a second data memory that is part of the radio network operations system on the superior level configured to store planned data;

a third provider that is part of the radio network operations system on the superior level configured to provide said planned data; and

a third interface configured to forward the call for data to said third provider and to provide said planned data within the radio network operations system on the superior level.

21. (Previously Presented) The system according to claim 10, wherein said radio network operations system on a subordinate level is an operations system configured to manage a regional radio network.

22. (Previously Presented) A system, comprising:  
at least one radio network operations system on a subordinate level;  
a radio network operations system on a superior level, initiating means being part of the radio network operations system on the superior level for initiating a controlling action;

call generating means for generating a call for data depending on the controlling action;

a first interface between said radio network operations system on the subordinate level and said radio network operations system on the superior level for forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and for forwarding data to the radio network operations system on the superior level, and

first providing means being part of the radio network operations system on the subordinate level for providing data in response to the call.

23. (Previously Presented) An apparatus, comprising:

a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level configured to forward a call for data which depends on a controlling action to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level, wherein data is provided in response to the call through the radio network operations system on the subordinate level.

24. (Previously Presented) A method, comprising:

forwarding a call for data which depends on a controlling action, using a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level, to at least one of the radio network



operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level; and

providing data in response to the call through the radio network operations system on the subordinate level.

## APPENDIX 2

### **EVIDENCE APPENDIX**

No evidence under section 37 C.F.R. 1.130, 1.131, or 1.132 has been entered or will be relied upon by Appellants in this appeal.

## APPENDIX 3

### RELATED PROCEEDINGS APPENDIX

No decisions of the Board or of any court have been identified under 37 C.F.R.

§41.37(c)(1)(ii).